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May 10, 1961

Dr. Elliott C. Levinthal
Hotel Bauer-Grunwald
Venice, Italy

Dear Elliott:

Your package from Stockholm received and some of its contents, together with another package of notes directly from Caspersson are being digested. We may, indeed, have to be sensitive to the problem of achromaticity of the objectives; however, in part this might be compensated for by the tilting of the target plane corresponding to different wavelengths.

Dr. Wolstenholme unfortunately is unable to accommodate you at CIBA House since this seems to be their busiest season; however, they will be glad to hold messages for you there.

I've had some correspondence and telephone conversations with Flickinger and he continues to be quite enthusiastic about getting Air Force support for us on precisely the premises, emphasizing the training aspect, that we had discussed. As a basis for doing this we are submitting the proposal which is attached here. I am inquiring about the feasibility of having your name appear as the principal investigator or as the co-investigator. Flickinger is coming out here next week, and we expect to tie this up at that time. He also thinks he can be of definite help to us in getting information to us as we had hoped. Flickinger also put some Itek people onto us, particularly a chap called Ore, whom I think you know. He came over with Thomas C. Layton and we had some discussion about the general problem of video MTI. I was rather optimistic at first, but it turns out that they do not really know a great deal about actual applications of our intended approach, but the organization certainly should be deep in it and they propose to do some homework. We have not done anything about purchasing storage tubes, as we would like to get a clear picture of the whole situation so as to get the most versatile instrumentation that we can. The GEC and the Raytheon scan conversion tubes seem to cost in the range of \$1500 to 2000, which would not be badly out of line with the costs of the other elements of our system. I doubt that we would have gotten down to brass tacks on actual hardware before you have returned.

I don't know whether the enclosed Halpern correspondence had anything to do with your visit to Princeton - I rather doubt it. There might be some point in your at least trying to call Halpern when you get back to New York and then use your own judgement whether there would be any point in paying him a visit. Obviously RCA would have a great deal of technical information and components that could be extremely useful to us, but how much could be done on a fly-by visit may be more questionable.

I did get back a rather elaborate report from Richard Davies of Philco on the analysis of flying-spot microscopy, but have not had a chance to digest it properly. I did not notice any proposal there to look into higher power outputs from UV-CRO tubes.

The reason that direct altimetry has not been included so far on the Mariner B capsule package is the very severe restriction on weight, and there would not be very much enthusiasm for spending even three to five pounds on this. There will be an accelerometer and it should be possible to integrate back from the point of impact to give the altitude history of the payload. This situation seems to me altogether ridiculous and I am trying to promote some more active pressure to expand the Mariner B project to a three vehicle expedition which would allow for some reinforcement and backup among the individual ships. Kennedy announced that Vice President Johnson was charged with investigating the areas of space work where we might have some chance of not necessarily coming in second to the Russians, and I should think that the investigation of Mars is our likeliest bet. Some of the appropriate letters have been written, but it is hard to predict the outcome. What will possibly happen, unfortunately, is that the decision will be deferred for eight or ten months, and then we will suddenly be faced with a crash program to devise the appropriate instrumentation for about a ten-fold larger mission than we are presently envisaging.

Hap is working away on his circuit design and I am doing my best to leave him alone at it. Not much else is new, that I wouldn't rather wait to discuss with you on your return. We hope you are having a wonderful trip, and our best to both of you. Please don't be bashful about calling on the Cavalli's if you have time in Pavia or Milan.

Yours sincerely,

Joshua Lederberg
Professor of Genetics

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